

Reader's Guide

to the Timbered Rock Fire Salvage and Elk Creek Watershed Restoration Draft Environmental Impact Statement



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This *Reader's Guide* provides an introduction to the contents of the *Timbered Rock Fire Salvage and Elk Creek Watershed Restoration Draft Environmental Impact Statement* (DEIS). It supplies the reader with a general understanding of the proposed alternatives for the Elk Creek Watershed, including the area burned in the Timbered Rock Fire. The *Reader's Guide* is not a substitute, but a companion to the DEIS. Only the key issues are summarized. For a complete understanding of what is proposed and the impacts of those proposals, readers should refer to the DEIS.

Throughout the Guide, page and map numbers refer readers to the DEIS for more information. The Guide also contains information on how to effectively participate in the public comment process.

What will I find in the Draft EIS?

The Timbered Rock Fire Salvage and Elk Creek Watershed Restoration Draft Environmental Impact Statement (DEIS) contains 4 chapters: Chapter 1 (Introduction), Chapter 2 (Alternatives), Chapter 3 (Affected Environment and Environmental Consequences), and Chapter 4 (Consultation and Coordination).

Chapter 1

Chapter 1 is the introduction to the DEIS. It provides a description of the project area and defines the purpose of and need for the DEIS. The issues are identified and the relationship between the DEIS and existing laws, regulations, policies, and other plans is defined.

Chapter 2

Chapter 2 contains a description of the seven proposed alternatives, including the No Action Alternative (Alternative A). The BLM's Preferred Alternative (Alternative G) is identified and defined. Descriptions of proposed salvage and restoration projects are included. Table 2-1 compares the proposed projects across alternatives, Table 2-2 provides a summary of the effects of the proposed projects by alternative, and Table 2-3 is a summary of the cumulative effects analysis by issue.

Chapter 3

Chapter 3 provides the description of the existing conditions in the project area, including pre- and post-fire conditions. An analysis of the impacts of the proposed alternatives on the resources in the project area is also included. The chapter is organized by resource topics. Under each resource, the affected environment and the environmental consequence of each alternative is discussed. In many EISs, Chapter 3 is reserved for Affected Environment discussion and Chapter 4 for Environmental Consequences. In this EIS, the two chapters are combined into one.

Chapter 4

Chapter 4 provides a list of the specialists and supporting technical specialists involved in writing the DEIS. It also includes a summary of the public involvement process and a list of agencies, organizations, and individuals consulted during the preparation of the DEIS.



How do I find things in the Draft EIS?

The Draft EIS is set up using a modified decimal system: 1.0/1.1, 1.2 . . . /1.1.1, 1.1.2 . . . / etc. The first figure in the numbering system represents the chapter number. For example, 1.0, 1.2.3, and 1.5.2.7 are all topics found in Chapter 1. The second decimal figure is the second level heading. All information under that heading will contain the same first two numbers. For example, 1.2, 1.2.6, and 1.2.10 are all topics found in Chapter 1, Section 2. The decimal numbering system continues down to a fourth level heading.

Example of DEIS decimal numbering system:

1.0 Purpose of and Need for Action

1.5 Scoping and Identification of Issues

1.5.2 Major Issues to be Addressed in Detail

1.5.2.3 Issue 3: Coarse Woody Debris and Snag Levels

Figures and tables are numbered in sequence using the modified decimal numbering system. The first number is the chapter number, the second number is a second level section number, and the third number indicates the order that figure or table occurs in the section. In Chapter 3, for example, all figures and tables related to section 3.12, Wildlife, will begin with 3.12. They will be numbered in order of appearance in Wildlife until section 3.13, Grazing, resets the numbering to 3.13-1.

Maps are numbered with chapter number and sequence. A letter may also be used to indicate the location of the map in the document. A map number followed by the letter 'f' (e.g., Map 2-1f) is a folded map found in the map packet. A map number followed by the letter 'b' (e.g., Map 3-3b) is a z-fold map attached in the back of the document.

If you could . . .

Using these numbers in your DEIS comments will help clarify the comment and will assist the EIS Team in developing responses.



Why is the BLM preparing an EIS?

In April 1994, public lands administered by the BLM within the Elk Creek Watershed were designated as LSR (Late-Successional Reserve) through the NFP (Northwest Forest Plan). The same LSR designation was incorporated into the Medford District RMP (Resource Management Plan) in 1995.

LSRs were designated through the NFP to “protect and enhance conditions of late-successional and old-growth forest ecosystems, which serve as habitat for late-successional and old-growth related species including the northern spotted owl.” Projects proposed within an LSR must be designed and implemented to protect or accelerate late-successional habitat, or improve threatened or endangered species habitat within the LSR.



Introduction

On July 13, 2003, the Timbered Rock Fire began burning in the Elk Creek Watershed. By the time the fire was controlled on September 14, 27,000 acres had burned. Nearly 12,000 acres of the BLM-administered lands within the watershed, designated as LSR, were affected by the fire.



Because of the controversy surrounding management of LSRs and any proposal to salvage fire-killed trees within an LSR, the BLM decided the preparation of an EIS (Environmental Impact Statement) would best serve the public and land managers. An EIS would also provide the opportunity to look at implementing projects designed to move conditions within the LSR closer to late-successional forest characteristics.



Because such a large area of LSR burned, the fire provided an opportunity for the BLM to look at late-successional forest enhancement and protection needs. The Timbered Rock Fire also provided a chance to evaluate the possibility of the economic recovery of the trees killed in the fire.

Purpose of the Draft EIS

The purpose of the Draft EIS is to analyze possible salvage opportunities and proposed restoration actions designed to move resource conditions closer to the desired future conditions identified in the NFP, WA (Elk Creek Watershed Analysis), and LSRA (South Cascades LSR Assessment) (pages 1-5 – 1-6).



Issues

The Draft Environmental Impact Statement addresses various issues in the management of the Elk Creek Watershed. An issue is an effect on physical, biological, social, or economic resources. These issues were identified during public scoping and through internal evaluation (page 1-9). The following issues are addressed in detail in the DEIS:

- ◆ **Recovery of the economic value of fire-killed trees.**
- ◆ **Fuel loading within the Elk Creek Watershed.**
- ◆ **Coarse woody debris and snag levels.**
- ◆ **Late-successional forest habitat.**
- ◆ **Cumulative effects from the fire and activity on industrial forest lands.**
- ◆ **Road density and delivery of sediment to streams.**
- ◆ **Threatened or endangered and other sensitive species.**

Seven alternatives were developed to respond to these issues. Resources that could be affected were identified and the existing conditions were described. The impacts of the proposed alternatives were analyzed for each resource.



What are the limitations on the Draft EIS?

Management options within the Elk Creek Watershed are limited by ownership patterns within the watershed and land use allocations designated under the NFP and Medford District RMP. See Chapter 3, pages 3-7 – 3-8 and Map 3-1, for discussion of ownership and land use allocations.

Private Land

The lower two-thirds of the Elk Creek Watershed are a mixture of private lands, including industrial forest lands, and BLM-administered lands. Management alternatives discussed in the DEIS do not apply to private property. Valid existing rights to private property will not be displaced by proposed actions in this Draft EIS, the Final EIS, or the resulting ROD (Record of Decision).

Late-Successional Reserve

Under the NFP and the Medford District RMP, BLM-administered lands within the Elk Creek Watershed were designated as Late-Successional Reserve. Standards and Guidelines for activities in designated LSRs were outlined in the NFP and apply to activities such as thinning and other silviculture treatments, salvage, road construction and maintenance, recreation, research, and others.



Riparian Reserves

Riparian Reserves were designated under the NFP and the Medford District RMP. Riparian Reserves include 160' on each side of non-fish-bearing streams and 320' on each side of fish-bearing streams. Management in Riparian Reserves must provide an area along streams where riparian-dependent species receive primary consideration. Riparian Reserves overlay other land use allocations.



Key Watershed

All BLM- and US Forest Service-administered lands within the Elk Creek Watershed are designated as Tier 1 Key Watershed under the NFP. These lands contribute directly to conservation of at-risk salmonids and/or resident fish species.

Aquatic Conservation Strategy (ACS)

The ACS was developed within the NFP to restore and maintain the ecological health of watersheds and aquatic systems contained on the public lands within them. In order to meet ACS objectives, riparian-dependent resources must be managed to maintain the existing conditions or implement actions to restore conditions.



Deferred Watersheds

Certain subwatersheds within the Elk Creek Watershed were designated in the Medford District RMP as deferred watersheds. These designations were made based on high cumulative effects. Planned timber harvest and other management activities in these deferred watersheds were suspended for a period of 10 years when the deferral will be reevaluated. Some activities could be allowed if they do not increase cumulative effects.

Paired Watersheds

Hungry Creek and parts of Upper Morine Creek were designated as paired watersheds in the Medford District RMP. These watersheds provide a watershed monitoring area and are deferred from timber harvest and other management activities.



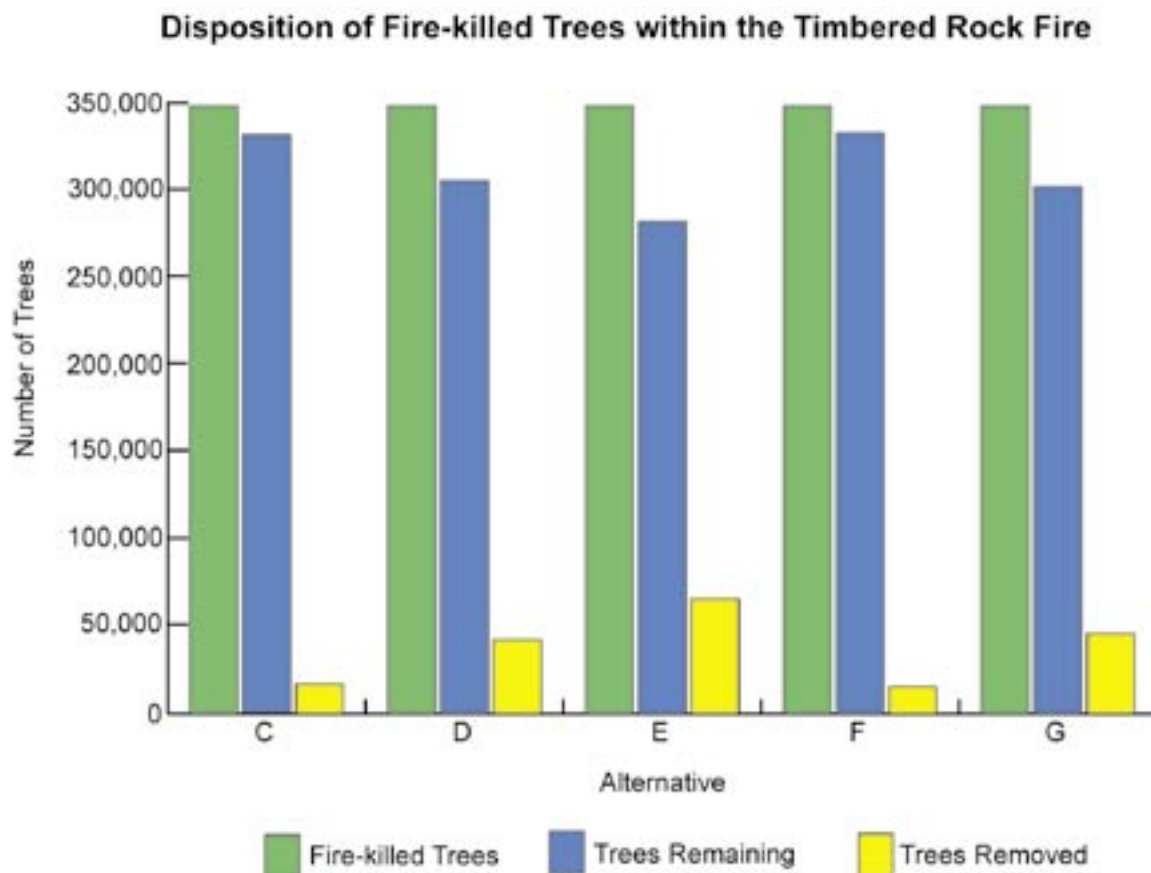
What is the Range of Alternatives?

In Chapter 2, the seven alternatives are defined. These alternatives address varying levels of salvage within the Timbered Rock Fire perimeter and restoration projects throughout the Elk Creek Watershed.

Salvage

Two types of salvage, area and roadside, are discussed. No salvage is proposed in Alternatives A and B. Salvage in Alternatives C through G varies by numbers of acres and levels of remaining snags and CWD (coarse woody debris). Acres of salvage proposed vary by alternative and an array of snags and CWD levels are considered that will still meet LSR objectives (pages 2-3 – 2-6).

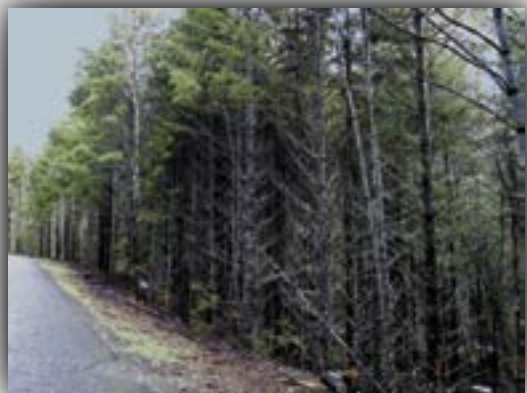
Area salvage would harvest only those trees killed by the fire. Harvest systems would include tractor, cable, and helicopter. Salvage in Alternatives C, D, and G is proposed in areas of high and moderate burn severity. Alternative E considers high, moderate, low, and very low burn severity areas. Alternative F recommends avoiding salvage in severely burned areas, erosive sites, fragile soils, riparian area, steep slopes, or sites



where accelerated erosion is possible. Alternative G also includes a research proposal designed jointly with Oregon State University scientists and the CFER (Cooperative Forest Ecosystem Research) group to study how post-fire salvage affects wildlife responses. For the study, four levels of salvage are proposed: none, light, moderate, and heavy. Sixteen, thirty-acre or greater units were selected for the study (pages 2-4 – 2-6).

Roadside salvage would be implemented in Alternatives C-G in order to eliminate trees in the fire area that are or could be hazards to road users. Harvest would occur in a 200' strip above and below the road (page 2-6).

Restoration Projects



Restoration projects are proposed in Alternatives B through G. Four levels of restoration are proposed: focused, moderate, extensive, and focused within the fire perimeter. The alternatives vary by the scope, location, and intensity of the restoration project. Project proposals include: oak woodland and meadow restoration, pine restoration, creation of fuel management zones, road projects (decommissioning, reconstruction, maintenance, culvert replacement, stream-crossing upgrades, and seasonal closures), installation of fish structures, reforestation, log piles for wildlife habitat, late-successional forest habitat restoration, fuel treatments within owl activity centers, pump chance restoration, riparian reserve thinning, rock quarry closure and rehabilitation, and eagle nesting habitat enhancement.

Proposed projects are consistent with the Elk Creek WA and the South Cascades LSRA (pages 2-8 – 2-28).

Alternative A (No Action) (page 2-29)

Alternative A describes the current management within the Elk Creek Watershed, based on the Medford District RMP and the NFP. No salvage is proposed and projects include those identified in the Timbered Rock

Fire ESRP (Emergency Stabilization/Rehabilitation Plan). This alternative provides the baseline for comparison with other alternatives.

Alternative B - No Salvage and Focused Restoration (Map 2-1f and pages 2-29 – 2-30)

Alternative B proposes no salvage in the fire area and a focused level of restoration throughout the watershed. Emphasis is on reducing competition in overstocked stands, fuels reduction treatments, and pine habitat restoration. Within the fire area, restoration would focus on high priority road work.

Alternative C - South Cascades Late-Successional Reserve Assessment (LSRA) Criteria for Salvage and Moderate Restoration (Map 2-2f and pages 2-30 – 2-32)

Alternative C area salvage focuses on high and moderate burn severity areas greater than 10 acres with less than 40 percent canopy cover where the fire resulted in stand replacement. Salvage is based on snag and CWD retention levels recommended in the South Cascades LSRA. BLM-identified hazard trees would be salvaged along roads except those within riparian areas and owl activity centers. Hazard trees identified by road users within those areas would be felled and left in place.

A moderate level of proposed restoration includes fish habitat improvement, vegetative treatments, fuels treatments, wildlife projects, road projects, pump chance restoration, and rock quarry closure and rehabilitation.

Alternative D - LSR Salvage using DecAID Wood Advisor for Snags and CWD and Moderate Restoration (Map 2-3f and pages 2-32 – 2-33)

Alternative D follows guidelines from the NFP for area salvage and leaves snag and CWD levels consistent with the DecAID wood advisor developed by the LSR Working Group. BLM-identified hazard trees would be salvaged along roads except those within riparian areas and owl activity centers. Hazard trees identified by road users within those areas would be felled and left in place.

A moderate level of restoration projects includes fish habitat improvement, vegetative treatments, fuels treatments, wildlife projects, road projects, pump chance restoration, and rock quarry closure and rehabilitation.



Alternative E - High Level of Salvage and Extensive Restoration (Map 2-4f and pages 2-33 – 2-35)

Under Alternative E, area salvage would be considered in all burn severity levels. Snag retention levels in high and moderate burn severity areas are based on a study by Haggard and Gaines (2001). BLM-identified hazard trees would be salvaged along roads except those within riparian areas and owl activity centers. Hazard trees identified by road users within those areas would be felled and left in place.

An extensive level of restoration projects would include the maximum number of potential projects. Reforestation in Alternative E would follow the ESRP.

Alternative F - Salvage Logging and Restoration Actions focused only within the Timbered Rock Fire Perimeter (Map 2-5f and pages 2-35 – 2-36)

Alternative F is based on the report by Beschta, et al. Severely burned areas, erosive sites, fragile soils, riparian areas, steep slopes, or sites where accelerated erosion is possible would be avoided. Existing snag and CWD levels would be retained. BLM-identified hazard trees would be salvaged along roads except those within riparian areas and owl activity centers. Hazard trees identified by road users within those areas would be felled and left in place.

The Beschta, et al. report does not address restoration activities outside the burn area. Restoration within the burn area would consist of fish habitat improvement, vegetation projects, fuels treatments, wildlife projects, road projects, pump chance restoration, and rock quarry closure and rehabilitation.

Alternative G (Preferred Alternative) - Salvage Based on Research Questions, Salvage in Stand-Replacement Units greater than 10 Acres, Moderate Restoration (Map 2-6f and pages 2-36 – 2-38)

In Alternative G, area salvage is proposed in research units and in the remaining area. Research would evaluate the influences of post-fire salvage and salvage intensities on wildlife species. Snag and CWD levels in the research units are based on study design. Snag and CWD levels in the remaining area are based on local and regional references.

A moderate level of restoration projects includes fish habitat improvement, vegetative treatments, fuels treatments, wildlife projects, road projects, pump chance restoration, and rock quarry closure and rehabilitation. Reforestation would implement the Timbered Rock Mixed-Species Reforestation Study (pages 2- 16 – 2-17).



How do the Alternatives compare?

Proposed Projects (pages 2-4 - 2-28)	Alternative A No Action – Continuation of Current Management (page 2-29)	Alternative B No Salvage; Focused Restoration (Map 2-1f) (pages 2-29 - 2-30)	Alternative C LSRA Salvage; Moderate Restoration (Map 2-2f) (pages 2-30 - 2-32)
Salvage			
Area Salvage	•None	•None	•247 acres
Roadside Salvage	•None	•None	•1,078 acres bull-line
Restoration			
Fish Habitat Improvement			
Culvert for fish passage		•Replace 4 and remove 1 culvert	•Replace 4 and remove 1 culvert
Fish Structures over 8 miles		•3 rock weirs and 15 logs per mile	•5 rock weirs and 20 logs per mile
Vegetation Treatments			
Late-Successional Forest Habitat Restoration		•Thin 1,391 acres	•Thin 1,391 acres
Pine Restoration		•Thin 156 acres	•Thin 952 acres
Riparian Reserve Thinning		•Thin 117 acres	•Thin 347 acres
Oak Woodland and Meadow		•Thin 1,003 acres	•Thin 1,544 acres
Reforestation	•6,000 acres	•3,016 acres	•3,176 acres
Fuels Treatments			
FMZs		•1,300 acres	•1,300 acres
Fuel Treatments within Owl Activity Centers		• 425 acres within 4 sites	• 425 acres within 4 sites
Fuels Treatment-West Branch Fire		•70 acres	•70 acres



Alternative D LSR Salvage with DecAID; Moderate Restoration (Map 2-3f) (pages 2-32 - 2-33)	Alternative E High Salvage; Extensive Restoration (Map 2-4f) (pages 2-33 - 2-35)	Alternative F Salvage based on Report by Beschta, et al.; Focused Restoration in Fire Area Only (Map 2-5f) (pages 2-35 - 2-36)	Alternative G Salvage based on Research; Moderate Restoration (Map 2-6f) (pages 2-36 - 2-38)
•820 acres	•3,269 acres	•213 acres	Research units: •328 acres Outside research units: •1,051 acres
•1,064 acres bull-line	•536 acres bull-line	•1,182 acres bull-line	•955 acres bull-line
•Replace 4 and remove 1 culvert	•Replace 4 and remove 1 culvert	•Replace 4 and remove 1 culvert	•Replace 4 and remove 1 culvert
•5 rock weirs and 20 logs per mile	•10 rock weirs and 25 logs per mile	•3 rock weirs and 25 logs per mile	•5 rock weirs and 20 logs per mile
•Thin 1,391 acres	•Thin 1,978 acres	• None	•Thin 1,391 acres
•Thin 952 acres	•Thin 2005 acres	•None	•Thin 952 acres
•Thin 347 acres	•Thin 1,050 acres	•None	•Thin 347 acres
•Thin 1,544 acres	•Thin 1,544 acres	•Thin 540 acres	•Thin 1,544 acres
•3,176 acres	•6,000 acres	•1,045 acres	•3,176 acres
•1,300 acres	•1,300 acres	•500 acres	•1,300 acres
•425 acres within 4 sites	•425 acres within 4 sites	•300 acres within 3 sites	•425 acres within 4 sites
•70 acres	•70 acres	•None	•70 acres



How do the Alternatives compare?(cont.)

Proposed Projects (pages 2-4 - 2-28)	Alternative A No Action – Continuation of Current Management (page 2-29)	Alternative B No Salvage; Focused Restoration (Map 2-1f) (pages 2-29 - 2-30)	Alternative C LSRA Salvage; Moderate Restoration (Map 2-2f) (pages 2-30 - 2-32)
Wildlife Projects			
Eagle Nesting Habitat		•Thin 50 acres at 2 sites	•Thin 50 acres at 2 sites
Log Piles for Wildlife Habitat		•None	•6 sites
Road Projects			
Reconstruction		•2.6 miles	•2.6 miles
Stream Crossing Upgrades		•15 sites	•11 sites
Maintenance		•77 miles	•77 miles
Decommission: partial or full		•36 miles	•36 miles
Road closures		•21 miles	•21 miles
Seasonal Road Closures		•None	•None
Pump Chance Reconstruction		•8 sites	•8 sites
Rock Quarry Closure		•5 sites	•5 sites



Alternative D LSR Salvage with DecAID; Moderate Restoration (Map 2-3f) (pages 2-32 - 2-33)	Alternative E High Salvage; Extensive Restoration (Map 2-4f) (pages 2-33 - 2-35)	Alternative F Salvage based on Report by Beschta, et al.; Focused Restoration in Fire Area Only (Map 2-5f) (pages 2-35 - 2-36)	Alternative G Salvage based on Research; Moderate Restoration (Map 2-6f) (pages 2-36 - 2-38)
•Thin 50 acres at 2 sites	•Thin 50 acres at 2 sites	•None	•Thin 50 acres at 2 sites
•6 sites	•6 sites	•6 sites	•6 sites
•2.6 miles	•2.6 miles	•2.6 miles	•2.6 miles
•11 sites	•26 sites	•26 sites	•11 sites
•77 miles	•115 miles	•68 miles	•77 miles
•36 miles	•43 miles	•17 miles	•36 miles
•21 miles	•21 miles	•14 miles	•21 miles
•None	•114 miles, mid- October to Apr. 30	•None	•114 miles, mid- October to Apr. 30
•8 sites	•8 sites	•4 sites	•8 sites
•5 sites	•5 sites	•5 sites	•5 sites



What are the current conditions in the watershed?

Overview

In 2003, a catastrophic fire event occurred within the Elk Creek LSR. The Timbered Rock Fire burned 27,100 acres across a mix of federal, state, private, and industrial forest lands. The fire created large areas of dead and dying trees and shrubs across a landscape with historically high vegetation densities and high fuel loads. The Timbered Rock Fire burned in a mosaic pattern with varying degrees of intensity over 12,000 acres of BLM-administered lands.



The following resources affected by the fire and by the proposed alternatives are discussed in Chapter 3:

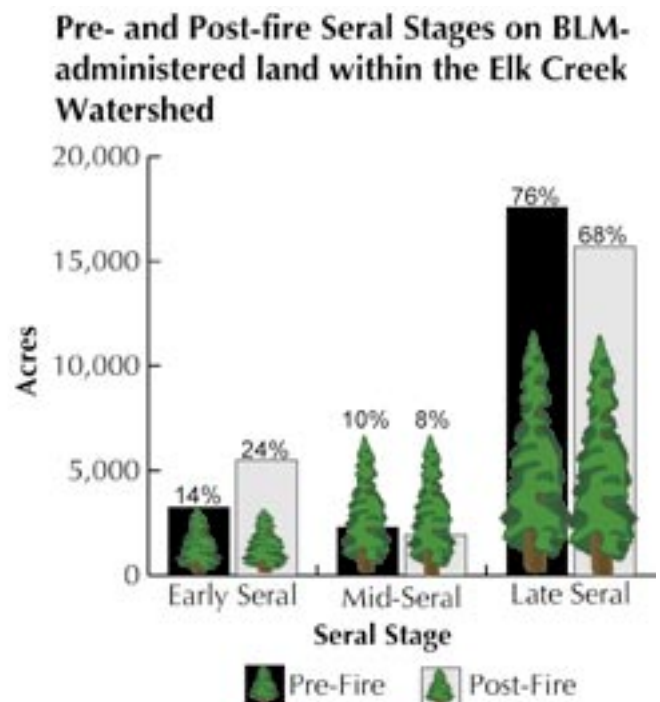
Soil, Hydrology, Fisheries, Vegetation, Special Habitats, Special Status Plants, Noxious Weeds, Fire and Fuels, Air Quality, Wildlife, Grazing, Roads, Cultural Resources, Public Safety, Economics, and Environmental Justice.

Changes in the Seral Stages

(pages 3-96 – 3-99)

Seral stages are the series of plant communities that develop during the ecological succession from bare ground to the climax, or final, stage of succession. Seral stages are naturally in a constant state of change.

On BLM-administered lands within the Elk Creek Watershed, some areas burned in the Timbered Rock Fire shifted from mid- and late seral stages to an early seral stage. The ideal condition for the LSR would be at least 55% in late seral stage. Before the fire, 76% of the

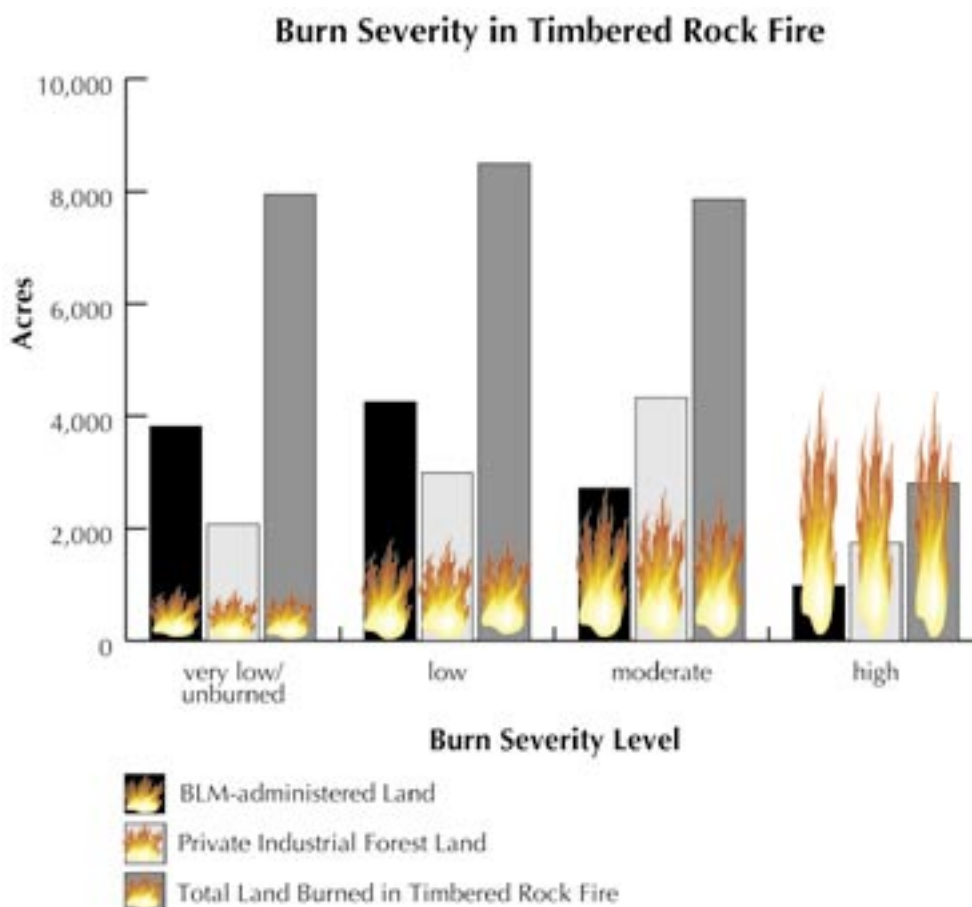


BLM-administered land in the Elk Creek Watershed was in late seral condition. After the fire, the percentage dropped to 68%.

Overall, on BLM-administered lands the early seral stage increased by 2,234 acres from 14% to 24%; the mid-seral stage decreased by 353 acres from 10% to 8%; and the late seral stage decreased by 1,880 acres from 76% to 68% of the watershed.

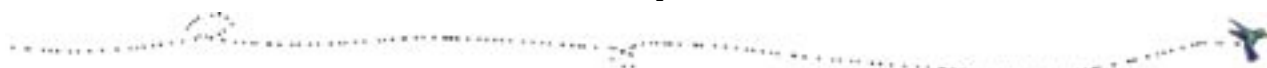
Burn Severity Levels in the Timbered Rock Fire (pages 3-155 – 3-158)

Burn severity levels in the Timbered Rock Fire are classified as very low/unburned, low, moderate, or high. Severity levels are not the same everywhere across the fire area. Burn severity levels vary by differences in geology, soils, and vegetation type and density throughout the burned area, as well as changing weather conditions during the period of burning.



Fisheries (pages 3-75 – 3-82)

The condition of the fishery in the Elk Creek Watershed depends on fish populations, passage, and habitat. Fish species found in the watershed include fall and spring chinook and coho salmon, winter and summer steelhead trout, and cutthroat trout. The wild coho salmon is listed as a threatened species.



Fish population health is influenced by natural and human-caused disturbances. The health of a population is determined by the extent a population can reproduce and maintain itself as a renewable resource. Pre-fire surveys indicated an increasing coho population in the past decade.

The Timbered Rock Fire may have affected fish in West Branch, Alco, Flat, Upper Sugarpine, Middle, and Elk creeks. During the fire, fish could move downstream to larger water bodies or seek springs for cooler water. Fish populations can leave a fire area and may return rapidly to areas where high burn severity occurred. Based on post-fire observations of juvenile fish, moderate to high burn severity had little effect on fish in these streams.



Fish naturally migrate to other drainages and maintain a connection between fish populations within the watershed. The greater a specie's range, the greater their ability to sustain production. In order to maintain a reproducible population, fish populations must remain connected. Fish populations in the Elk Creek Watershed are very well connected which allows for viable salmon and trout populations.

Habitat determines the amount of fish a stream can support. Historically, streams within the watershed had a greater amount of woody debris. Fires and high fire frequency in the watershed were the primary mechanisms for delivery of large wood into streams. Large wood in streams provides cover for fish, captures gravels for spawning, and helps stabilize the stream banks and channel. Before the Timbered Rock Fire, the Elk Creek Watershed was lacking large woody debris and spawning gravel recruitment which resulted in a less than desirable habitat complexity.

Soil (pages 3-8 - 3-24)

The discussion on the soil resource in the Draft EIS is separated into four categories: mass wasting, soil erosion, soil disturbance, and soil productivity.

Mass wasting consists of landslides, debris flows, and rock falls. Large-scale fires may increase mass movement of soil, especially in steep, mountainous terrain as occurs in 11% of the watershed. The incidence of mass wasting in the fire area is likely to increase in the next 2 to 5 years, especially in areas of high and moderate burn severity.

Soil erosion in undisturbed forests is rare because the soil surface is protected by



vegetation and organic matter. In areas of high and moderate burn severity, the protective vegetation and organic matter is gone. The loss of this surface cover decreases the movement of water into the soil, increases the overland flow of water, decreases nutrient availability, increases the risk of erosion, and increases the risk of sediment entering streams. Riparian vegetation filters sediment and prevents it from reaching streams. Where riparian vegetation burned at high or moderate severity, sediment is more likely to move into streams. Erosion rates will be reduced as vegetation recovers.

Soil productivity is the ability of the soil to supply the nutrients needed for plant growth. These nutrients are released as organic matter decomposes. Fire affects soil productivity by reducing the amount of organic matter and the total amount of nutrients stored in organic matter. Fire may also increase the nutrients available for use by plants that colonize a site after a fire. Although the fire increased the loss of organic matter, it also increased the supply of CWD, which contributes to moisture and nutrient retention and eventually breaks down to become organic matter.

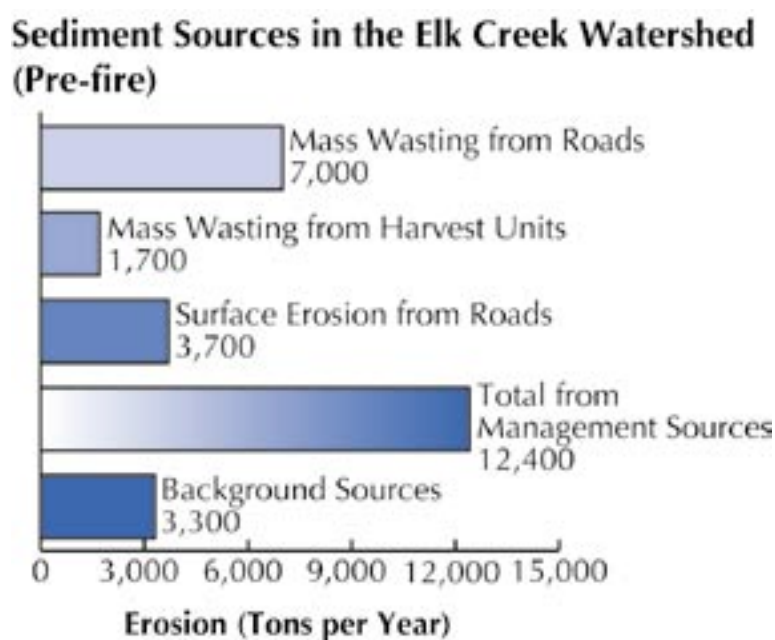
Hydrology (pages 3-44 – 3-52)

Hydrology addresses water quality and quantity within the Elk Creek Watershed.

Water quality concerns the amount and kind of sediment, water temperature, channel morphology (or stream structure), and the amount of large woody debris.

Roads are a major source of sedimentation and stream crossings and roads paralleling streams have the greatest probability of delivering fine sediment to streams. The watershed is considered to have a high road density at 4.5 miles of road per square mile. About 39% of the roads in the watershed are located inside Riparian Reserves.

Four streams within the Elk Creek Watershed are classified by the Oregon DEQ (Department of Environmental Quality) as water quality limited. Three failed to meet the DEQ summer standard for stream temperature and one did not meet the standard for Dissolved Oxygen.



The Timbered Rock Fire burned through about 80% of the deferred watersheds located within the Elk Creek Watershed. Vegetation in Riparian Reserves was damaged or lost. The loss of vegetation in Riparian Reserves and uplands results in increases in stream temperature, sediment levels, stream flows, runoff, and short-term amounts of large woody debris.

Wildlife (pages 3-167 – 3-179)

Two federally threatened, five Survey and Manage, and six Bureau Sensitive species are known or expected to be in the project area. The Timbered Rock Fire decreased the amount of habitat available for species dependent on late seral habitat and increased the habitat for those species dependent on early seral habitat. Fragmentation also increased. Fragmentation reduces the size of the stands that make up a forest and the extent of the habitat that allows species to breed, feed, disperse, and move around.

Species associated with late-successional habitat include northern spotted owl, northern goshawk, fisher, great gray owl, and red tree vole. The areas burned at high and moderate severity are no longer considered habitat for those animals. Habitat for wildlife species dependent on cavities, snags, and down wood, such as woodpeckers and bats, was also reduced. Over time, however, this habitat would increase as these structures develop from the fire-killed trees. For species dependent on early seral habitat, such as orange-crowned warbler and rufous hummingbird, areas burned at high and moderate severity provide an increase in habitat.

Northern Spotted Owl (pages 3-169 – 3-172)

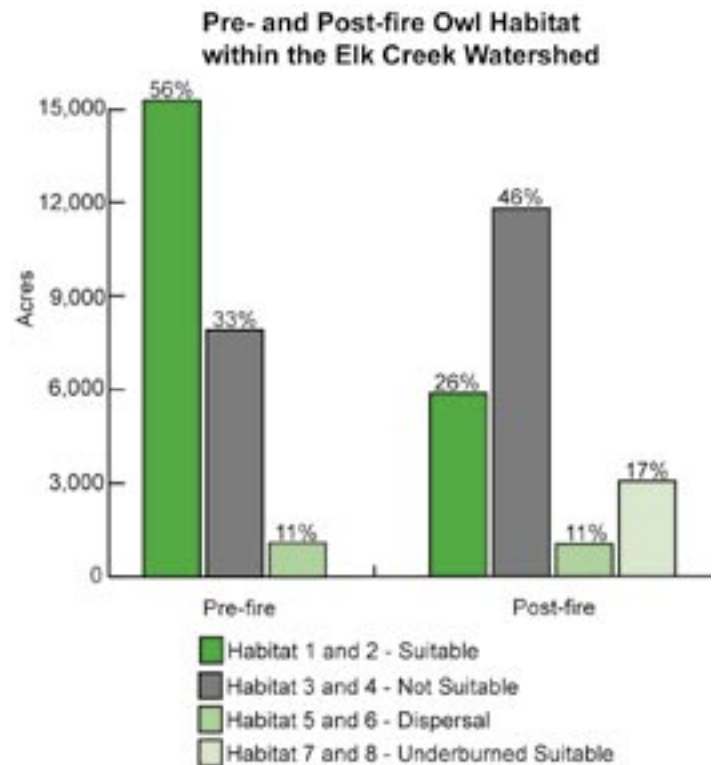
The Northern Spotted Owl was federally listed as a Threatened Species in 1990. Within the Timbered Rock Fire area, 19 spotted owl activity centers were located on BLM-administered land. Another 12 activity centers were found on lands within the watershed but outside the burn area. Pre-fire, about 10,500 acres were considered suitable northern spotted owl habitat (Habitat 1 and 2).

All 19 owl activity centers within the fire area were underburned where nearly all vegetation to a height of 10 feet was killed. In those areas, vegetation and spotted owl prey species were reduced on about 4,100 acres for 2 to 5 years. One activity center was totally burned



and another had 2/3 of the timber killed. Suitable habitat was burned severely enough on 2,887 acres to shift from suitable to unsuitable for at least 60-80 years.

Owls may return to severely altered sites following a burn, although 9 sites are predicted to remain empty. Some owls may stay in their old activity centers, but abandon them mid-season. Some activity centers may shift to less impacted stands. Shifts will continue in the future as the underburned areas improve to support a higher density of prey species.



Roads (pages 3-209 – 3-210)

Road-related erosion is the primary management activity that delivers sediment into the streams. Road density for the Elk Creek Watershed is 4.5 miles per square mile. Road densities above 4 miles per square mile are considered moderate to high. High road densities are associated with changes in stream structure, riparian vegetation, sedimentation, and surface erosion rates. Roads that parallel streams have the greatest chance of delivering sediment into streams. About 39% of the roads are located within Riparian Reserves.

Road conditions were inventoried the winter of 2002-2003 and a team of specialists determined the transportation management objectives for the watershed. Future transportation needs were evaluated and recommendations for treatment were made. Treatments ranged from improving to fully decommissioning road segments.

Inventory of Roads in Elk Creek Watershed	
Total Miles of Road	629.2 miles
Square Miles	136.3 square miles
Road Density, All ownerships	4.6 miles/square mile
Road Density, BLM controlled only	4.3 miles/square mile
Roads in Riparian Areas	243.5 miles
Road within Riparian Areas of Fish-bearing Streams	84.7 miles
Road within Riparian Areas of Non-Fish-bearing Streams	158.8 miles

What are the impacts of the proposed actions?

Chapter 3 contains the scientific and analytic basis for the comparisons of Alternatives A-G. This section describes the probable environmental consequences, or impacts, of each alternative on selected resources. Each resource contains a description of current conditions for that resource followed by the anticipated impacts of each alternative. The alternatives are analyzed for direct, indirect, and cumulative effects.

Impacts can be positive, negative, or neutral. A proposed project may have an adverse impact on one resource, yet provide benefits to another. It is recommended the reader thoroughly read Chapter 3 in order to understand the overall consequences of each alternative.

Every alternative would result in some level of impact. Even the continuation of current management proposed in the No Action Alternative (Alternative A) would provide impacts. The reader should make a detailed review of the proposed alternatives and the consequences of each alternative in order to decide whether the desired results will be achieved and if the anticipated impacts are properly described.

Cumulative Impacts

A cumulative impact is one that results when the impacts from the proposed actions under each alternative are added to other past, present, and reasonably foreseeable actions. These other actions may be undertaken by other agencies, Federal or non-Federal, or private entities. Some of the cumulative impacts considered include salvage and other management actions on private industrial forest lands in the Elk Creek Watershed, fire suppression activities during the Timbered Rock Fire, recent fires and proposed timber sales in adjacent drainages, and possible actions on other federally-administered lands in the Elk Creek Watershed and in adjacent watersheds.



How can I get Involved?

Provide Feedback

The release of the Draft EIS starts a 60-day public comment period. During that time, the BLM welcomes any comments on the contents of the DEIS. Comments will be most useful if they are specific; mention particular pages, sections, or chapters; and address one or more of the following: how well the Preferred Alternative meets the Purpose and Need, any new information that would affect the analysis, possible improvements in the analysis, or suggestions for improving or clarifying the proposed management direction.

Substantive comments or summaries of comments will be included in the Final EIS. Responses to the comments will also be included. Possible responses may be to modify alternatives; develop and evaluate alternatives not previously considered; supplement, improve, or modify the analyses; make factual corrections; or explain why the comment does not warrant further agency response.

Keep in mind, all comments will be made available for public review. The names and addresses of the comment submitter will be included, unless the submitter specifically requests confidentiality.

Attend an Open House

The BLM will host two open houses: September 10 at the Medford District BLM Office in Medford, Oregon and September 11 at the Upper Rogue Community Center in Shady Cove, Oregon. The Interdisciplinary Team of specialists involved in the preparation of the Draft EIS will provide the public with an opportunity for help in understanding the analyses of proposed actions. Oral or written comments may be submitted at the public meetings.



What's next?

After the close of the comment period on October 15, public comments will be read, analyzed, and used to write the final EIS. Comments will be useful in developing the Final EIS, scheduled to be released by the end of 2003. The Record of Decision is expected to be released in early 2004.

EIS Timeline					
Draft EIS Available for Public Review 60-day public review period	Public Meeting in Medford	Public Meeting in Shady Cove	Comment Period Ends	Final EIS Available for Public Review 30-day review period	Record of Decision
August 15, 2003	September 10	September 11	October 15	December	Early 2004

For a paper copy of the Draft EIS or a CD version, please contact Medford District BLM at 541-618-2200. Additional information and a copy of the DEIS are available on the Timbered Rock Fire EIS website at

<http://www.or.blm.gov/Medford/timbrockEIS/index.htm>

Please submit comments by October 15, 2003 to:

**Bureau of Land Management
Comments, Timbered Rock DEIS
3040 Biddle Road
Medford, OR 97504**

Fax: 541-770-6634

Phone: Jean Williams at 541-944-6620 or John Bergin at 541-840-9989

E-mail: or110treis@or.blm.gov

